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No. X.

VALVE FOR STEAM BOILERS.

The LARGE SILVER MEDAL *and* TEN GUINEAS *were this session presented to Mr. C.* SOCKL, *17, Royal-row, Lambeth, for a safe Valve for Steam Boilers. The following communication was received from the candidate, and a model of the invention has been placed in the Society's repository.*

17, Royal-row, Lambeth,
December 20, 1824.

SIR,

I TAKE the liberty of submitting to the consideration of the Society a safety valve for a steam boiler, which, in my humble opinion, is new, and will afford great security, particularly on board a vessel. Should you find it worth laying before the committee, you will very much oblige

Yours, &c. &c.
CHARLES SOCKL.

A. Aikin, Esq.
Secretary, &c. &c.

P. S. I have got one of my valves fixed upon a small model of a boiler, which is in operation; should it be desired by the committee to see the action of it, I shall be happy to attend.

I propose, that instead of the solid lid which covers the main hole, a copper plate or dish be substituted, as shown in figs. 5, 6, 7, plate I. where *b b* is the copper dish, surrounded by a ring of the same, by which the plate is firmly screwed down upon the rim of the main hole. In the middle of this plate is fixed the valve, of which *f f* is the collar, made of iron or brass; *d* the plug, which is ground air tight into the collar, and is kept in its place by the spiral spring which surrounds its stem, and the stay *c*: over the whole is fixed a strong cross piece *a a*, which is firmly screwed down upon the ring that secures the plate *b*. In the cross piece works a regulating screw *e*, which may be screwed down upon the head of the plug *e*. The operation of the valve is easy to understand. *a* the plate or dish is only one-fourth or one-third the thickness of the other parts of the boiler; it will not afford the same resistance to the steam: when this, therefore, gets beyond the ordinary pressure it will cause the plate to become somewhat convex, and will thus leave a clear space between the collar *f* and the conical plug *d* for the steam to escape; as soon as the power diminishes, the plate will, by its elasticity, return to its former place, and by closing down upon the plug, prevent any further escape of steam.